

Integrated Service Portfolio in Multi-Sided Digital Retail Platforms

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Abstract

Purpose

Today, facilitating interaction between customers and service providers is crucial for creating value to all stakeholders in the value-exchange relationship (cf. Lusch et al. 2007; Brodie et al. 2011). As ICT-development has allowed several firms such as Amazon.com to set the benchmark with a user-friendly customer experience, it is the integrated service portfolio that can lead to a sustainable competitive advantage as they facilitate engagement and value co-creation between platform actors. This paper seeks to understand how platforms, specifically multi-sided digital retail platforms, aim to create competitive advantage through their digital service offering.

Design/methodology/approach

This paper looks at the role of the integrated service portfolio in digital retail platforms for value creation through a qualitative, cross-sectional -case study of the service portfolios of two leading multi-sided digital retail platforms Alibaba Group and Rakuten Ichiba.

Findings

The findings show that as the customer experience has become standardized across the retail sector, it is now the integrated service portfolio in the ecosystem that creates competitive advantage for digital retail platforms over incumbent offline or online retailers.

Practical implications

As multi-sided markets have gained increased traction and interest over the past few years, this study helps managers and practitioners identify how businesses can build integrated service processes through vertical or horizontal integration in their business model. We contribute to both marketing and retail literature where the concept of multi-sided digital retail platforms is still a novel research avenue despite their implications for both shopper behavior and management.

Originality/value

Multi-sided markets are a relatively new phenomenon and as the industry is transforming quickly, academic research is still one step behind. This study contributes to platform research as so far academic research has overlooked developments in the field especially in the retail sector.

Keywords: Platforms, Ecosystem, Retail, Service-Dominant Logic, Customer Experience, Service Process

“We see our customers as invited guests to a party, and we are the hosts. It’s our job every day to make every important aspect of the customer experience a little bit better.”

– Jeff Bezos, Amazon CEO, Bloomberg Businessweek 8/2004

1. Introduction

As the amount of internet users has grown from a mere 36 million in 1996 to around 3.7 billion worldwide in 2016 (Internet World Stats), retailers around the world have been trying to keep-up with this new channel for commerce and the ever-changing customer preferences. Many traditional brick-and-mortar retailers are still trying to catch-up to the standards created by early online retailers such as Amazon.com or eBay who have set the global benchmark for online customer experience through a user-friendly front-end with a personalized, highly responsive customer experience also in the online domain. However, the recent growth of multi-sided digital retail platforms (cf. Han et al. 2016; McIntyre & Srinivasan 2017) such as Alibaba Group in China and Rakuten Ichiba in Japan challenges this notion of focus on only the user interface, as their business model is built through an integrated service offering on their digital platform rather than purely on user experience with the goal of a platform ecosystem to facilitate interaction between customers and service providers to co-create value and facilitate customer lock-in across the digital service platform (e.g. Lusch et al. 2007; Brodie et al. 2011; Kijima & Arai 2015). Thus, while many retailers are still trying to copy Amazon.com’s approach, the next wave of online retailers, multi-sided digital retail platforms, are aiming to take on a larger sphere of digital services also outside of their core retail business. This takes digital platforms further away from the traditional notion of customer experience that is centered primarily on the front-end of the platform.

Previous research on platform ecosystems have so far focused on external innovation platforms such as the Apple iPod (cf. Eisenmann et al. 2006; Tiwana et al. 2014) rather than digital ecosystems, where the platform intermediates a service portfolio around a digital retail platform (Hagiu & Wright 2013). Our study fills this gap in prior research by identifying such service portfolios in digital multi-sided retail platforms. In these platforms, the service offering is also important as the platform owner must create some value added for the end-customer so that the customer will not buy directly from the platform’s service provider or from a competitive channel for example if the service providers multi-home (Choi 2010). Thus, we aim to understand how service is orchestrated between the platform owner and the end-customer rather than between the platform owner and the complementors which most research has so far focused on.

In this paper, we focus on the integrated, digital service portfolios of digital retail platforms to raise awareness amongst both practitioners and academics about how to create competitive advantage when the customer experience and customer interface has become standardized across the digital service sector. Our research question is *“What is the role of the ecosystem in the business model and service portfolio of multi-sided digital retail platforms?”*. More specifically, we conduct an empirical comparison on the ecosystems of two global

multi-sided digital retail platform companies Alibaba Group and Rakuten Ichiba. The purpose of this paper is thus to show through an empirical analysis of two digital retail platforms, how retailers can use an integrated service portfolio to create competitive advantage and how this is triggered to co-create value with end-customers and ultimately facilitate customer-lock in. We contribute to both service and retail literature by studying customer experience in a multi-sided digital retail platform context and fill a gap in empirical and theoretical research by focusing on these types of digital retail business models.

The paper is structured as follows. We review literature on platforms including value co-creation and customer experience in digital services. Then we show through a case study on the Alibaba Group and Rakuten Ichiba ecosystem the additional service dimensions that are possible in digitalized service platforms that add to the retail customer experience. Finally, we provide conclusions and theoretical as well as managerial contributions based on our qualitative case study.

2. Literature Review

The advent of digital service platforms and new technologies in the past decade has changed the logics of exchange across a wide range of industries (Davies et al. 2005; Han et al. 2016). Through network effects with users attracting more complementors onto the platform and vice versa (cf. Haucap & Heimeshoff 2014), these platforms aim to become as large and global as possible with the value of a platform measured in the size of its user base. Service platforms are theoretically interesting because they enable the interaction between two or more platform participants (Hagiu & Wright 2015) by providing a structure for direct and indirect exchange (Lusch & Nambisan 2015). In this new service environment, customer networks actively interact with suppliers' networks as retail has shifted from a single supplier and single customer perspective to a multi-sided logic (Pinho et al. 2014). The interaction between multiple sides of a service platform facilitates the co-creation of value amongst platform participants, through the dynamic and purposive inter or intra-dependent networks it intermediates (Adner & Kapoor 2009; Thomas et al. 2014; Kijima & Arai 2015). In these types of service platforms value is created between the interactions and sharing of access to configure resources for mutual value creation between service providers and end-customers (cf. Demirkan et al. 2011).

For retailers, the use of these kind of service platforms generates new types of competitive advantage (cf. Rintamäki & Mitronen 2015). While previously retailing was dominated by efficient, hierarchical organizations (Mitronen & Möller 2003), now pure multi-sided digital retail platforms compete with a vast digital ecosystem that creates new types of customer experience to facilitate customer lock-in (Hagiu & Wright 2013). Thus, what differentiates companies such as Alibaba Group and Rakuten Ichiba from traditional retailers like Walmart, is that their business model is built around a digital ecosystem that includes several different business areas, also outside of their core business area of retail.

A business ecosystem is a loosely connected business community that is made-up of different levels of organizations that share a common goal and co-evolve with each other (Moore 1993; Lusch & Nambisan 2015; Rong et al. 2015). In a platform ecosystem, the platform owner has relinquished ownership and control over components and modules of the platform, to foster the co-creation of complementary assets and components in the ecosystem (Thomas et al. 2014). While a software platform serves as a foundation on which outside parties can build complementary products or services (Tiwana 2014), in retail platforms the platform owner mediates an ecosystem consisting of both independent service providers and end-customers (cf. Evans 2003; McIntyre & Srinivasan 2017). However, rather than simply a technology or software platform consisting of different types of modules or components (Lusch & Nambisan 2015), retail platform owners such as Alibaba Group and Rakuten Ichiba have adopted more of a platform business group structure (cf. Jia & Kenney 2016), where the digital ecosystem of the platform consists of a multitude of companies bound by both formal and informal ties.

The advent of digital platforms has created new service exchange opportunities across a wide range of industries (Lusch & Nambisan 2015). These service platforms aim to foster value co-creation by facilitating the interaction and engagement between the platforms participants (Verleye 2014; Kijima & Arai 2015; van Alstyne et al. 2016). However, most studies view the main role of a service platform as purely serving the actors in the service exchanges, for example seeing a platform as only providing the infrastructure for facilitating the transactions taking place on a retail platform, rather than looking at how service platforms can service the platforms' end-customers (Lusch & Nambisan 2015). The question of how the service platform itself facilitates customer lock-in is for instance generally ignored. Besides the front-end and back-end processes from a personalized front page to logistics (Chesbrough 2011; Paul 2015) the user-experience of a focal service platform has not been studied empirically although platforms also need to create lock-in to their customer base in order to encourage network effects (cf. Haucap & Heimeshoff 2014). The higher the customer base of the platform, the more complementors the platform will be able to attract. While most studies look at network effects as a primary benefit to join a platform (cf. Teece 1998), when the competition is high amongst platforms it is likely that the platforms need to offer something more than just a high number of actors or complementors to attain a loyal end-customer base.

Service platforms can be also characterized as engagement platforms. Engagement platforms are purposefully built to enable value co-creation between complementors and end-users (Ramaswamy 2008). These platforms facilitate both virtual and physical interactions (Breidbach et al. 2014), by expanding virtual interactions to more service domains also in the physical realm. Breidbach et al. (2014; 2016) categorize engagement platforms to operating, instrumental, enabling and supplying dimensions for engagement platforms. The role of these dimensions is facilitating customer-to-firm interactions, helping integration to the platform,

supporting complementors performance and providing an integrative touch point for customer-to-firm interactions respectively (Breidbach et al. 2014; 2016).

3. Methodology

This study is based on a qualitative case study (Yin 1994; 2003) on the digital ecosystems of two global multi-sided digital retail platform companies, China based Alibaba Group and Japan based Rakuten Group. Alibaba Group consists of multiple retail platforms in China while Rakuten Group runs the Rakuten Ichiba platform in Japan which we focus on in our case study. Qualitative case methods are used as the basis of this study, as they are suitable for exploring theoretically new phenomenon (Boeije 2009) such as multi-sided digital retail platforms. The research question we are answering through the case study is *“What is the role of the ecosystem in the business model and service portfolio of multi-sided digital retail platforms?”* to provide an understanding for the role of the ecosystem in providing an integrated customer experience on digital retail platforms. The two retail platform firms Alibaba Group and Rakuten Ichiba were selected for comparison due to their service based ecosystem or platform business group that extends also outside of their core retail business platform as they both aim to be leading internet companies across a wide range of service domains.

Case studies are an increasingly popular tool that are used in-order to gather rich, empirical descriptions of instances of a specific phenomenon (Yin 1994; Eisenhardt & Graebner 2007). Our primary data source is publicly available secondary data on the service processes of the two digital retail platforms. Over a hundred documents each spanning from single to hundreds of pages was analysed by the researchers to understand the company’s business models and answer the research question. This dataset includes a full set of annual reports, analyst reports, SEC filings, Harvard Business School cases, popular journal articles, industry reports, books and prior journal articles on the companies throughout their operation. Table 1 (below) lists the data sources used in this study in more detail. While the use of secondary material as a primary data source has its obvious limitations as discussed later in this paper, secondary data has been deemed fit for similar levels of analysis in prior works in the field of retailing (cf. Ritala et al. 2014) due to the richness and broad scope of the data.

Source	Details	Use in Analysis
Annual Reports: Alibaba Group (2014 – 2016) Rakuten Inc. (2005 – 2014)	Providing a detailed overview of the performance of the platforms and key developments	Source for event database of key developments and product/service launches Describing the customer experience processes and ecosystem of the platform

Books: Clark (2016) Erisman (2015) Mikitani (2013)	Background as books were written by industry experts, former executives or CEO's of the platforms	Source for event database of key developments and product/service launches Describing the customer experience processes and ecosystem of the platform
Popular Journal Articles & Industry/Analyst Reports	Articles and reports describing the ecosystem multi-sided digital retail platforms and providing an overview of key developments as well as product/service launches	Source for event database of key developments and product/service launches Describing the customer experience processes and ecosystem of the platform
SEC Filings Alibaba Group (2014-2016)	Quarterly SEC filings provide similar information to Annual Reports but fill-in information gaps in the reports	Source for event database of key developments and product/service launches

Table 1. Description of Data Sources and their use in the Case Study

Based on the analysis of the empirical material gathered, an overview of the business models and the ecosystems of the two case companies was written. The data analysis started with identifying and collecting relevant information on the history, business models, and the ecosystem of the case companies in order to understand platform business models in the retail sector. Both companies were analysed separately and a qualitative as well as quantitative case database was created. Atlas TI software was used to sort the empirical data and identify direct quotations as well as codes from the data that fit the research question at hand. Following the principals of qualitative research, the data analysis was iterative with the researchers constantly revising and redefining the analysis as more data was collected. Once we had identified and analysed all parts of the business models of the two companies, the researchers deemed that saturation had been reached and no more additional empirical material was collected on the case companies. The final part of the data analysis included combining, linking and sorting the data to answer to the research questions.

4. Alibaba Group and Rakuten Ichiba: The Case Study

In this section, we show through two case studies of how a digital service ecosystem is structured in multi-sided digital service platforms and how it functions. We first shortly describe the case companies and then proceed by focusing on their digital service ecosystem, especially in terms of their role in the overall end-customer experience on the platform.

4.1 Alibaba Group

Alibaba Group, based in Hangzhou China, is the worlds' largest online retailer based on volume with a GMV (Gross Merchandise Value) of \$485 billion and 423 million active annual buyers (Alibaba Group, 2016). Alibaba has several local Chinese and global retail platforms ranging from wholesale B2B channels to B2C and C2C

commerce. Alibaba Group functions as a pure play e-commerce platform, simply facilitating transactions between independent merchants and customers without investments in own inventory or logistics, outsourcing these functions to external service providers. For end-customers, besides the access to millions of independent merchants through Alibaba’s platforms, the digital service ecosystem outside of retail also plays an important role. The digital ecosystem helps lock-in customers as through Alibaba’s platforms they are able to gain access to several digital services but also gives Alibaba an additional revenue channel. Through a vast ecosystem, Alibaba can gain more information about its customers for example from its digital social media and banking businesses that it can leverage across its digital business portfolio.

Outside of its retail platforms, Alibaba’s integrated service ecosystem extends to a wide range of businesses through horizontal integration as shown in figure 1 (below). All of these digital services allow Alibaba to collect transaction data on its consumers from a wide range of exchanges. Outside of this immediate ecosystem shown in the figure Alibaba’s business portfolio also consists of web browser UCWeb with hundreds of millions of users worldwide and the numerous investments it has made in start-ups both locally in Asia and globally mainly in Silicon Valley based companies. As Alibaba Group has stated for example in its 2015 letter to shareholders, it’s retail business is only one part of group level strategy for the future and due to a commission based business model it aims to gain higher revenues from its ancillary services on the Alibaba platform in the future. The Alibaba ecosystem consists of services such as Finance (Ant Financial), Digital Marketing (Alimama), Cloud Computing (Alibaba Cloud), Social Media (Weibo), Navigation (AutoNavi), Digital Entertainment (Youku) and Logistics (Cainiao Alliance) which Alibaba own either directly or indirectly through various ownership structures. As a result, these ecosystem members are legally independent but are integral parts of the Alibaba ecosystem despite their separate operations and revenue models. Although Alibaba Group’s strategic goal is become a global retail platform soon, most these digital services on the Alibaba ecosystem are only available in mainland China.

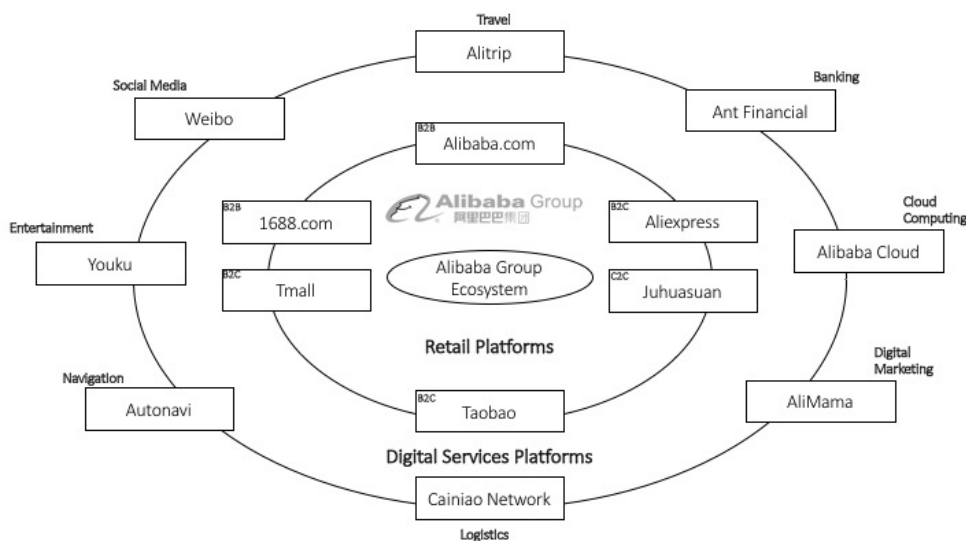


Figure 1. Alibaba Ecosystem

For end-customers, the role of the ecosystem is to support the retail business and drive traffic to the retail platforms. Social media and digital entertainment are crucial to achieve this target, especially as they are integrated to Alibaba's retail and payment platforms, making it seamless for Chinese users to buy products for example from Alibaba's Taobao or Tmall B2C channels marketed on other parts of the Alibaba ecosystem. For example, Alibaba's \$4.2 billion investment in 2015 to Youku, a Chinese Video Streaming company, was one way of achieving this target of gaining new users to the Alibaba ecosystem. Alipay, part of Alibaba affiliated Ant Financial, has also become the market leader in China for online payments. In 2014, Alipay settled a total of 80 million individual transactions per day. With the Alipay digital payment solution, Alipay Wallet, customers can make payments also outside the Alibaba ecosystem creating further customer-to-firm interactions also in the physical realm. These physical interactions are also an important part of customer engagement, expanding the reach of the Alibaba ecosystem also outside of digital. Alibaba is also creating a physical brick-and-mortar presence in China for example through its strategic partnership with Chinese retail operator Bailian Group in 2017, to add to its customer engagement and interaction also in the physical realm.

At the heart of the ecosystem is the Big Data generated through the interactions on the ecosystem and the Alibaba advertising engine. While for end-customers the ecosystem provides an integrated customer experience, for Alibaba the ecosystem it forms a major part of the earnings model. Through the sheer volume of transactions on its e-commerce platforms, Alibaba sells this transaction data i.e. premium data analytics to its merchants using upgraded membership packages to allow merchants to understand their customers in almost real-time. The Big Data also allows Alibaba to come up with credit ratings both for its customers and merchants to sell microloans through Alibaba affiliated Ant Financial. Furthermore, through the advanced customer understanding it can sell highly targeted advertising based on the knowledge of its end-customer base and their shopping behavior.

4.2 Rakuten Ichiba

Rakuten Ichiba based in Tokyo Japan and a part of Rakuten Group, is a leading Japanese online retailer and digital service provider with around 60 million end-customers on its e-commerce platform (Rakuten Inc. 2016). Rakuten Ichiba is a pure play e-commerce platform, like Alibaba Group, and outsources most of its supply chain functions to third party service providers such as its logistics partner Yamato Transport in Japan. Rakuten's retail platform is built around its mission of shopping as entertainment, with its platform serving as a virtual shopping mall to its merchants with the ability to customize their storefronts like a physical shopping mall. Unlike several other digital platforms, on Rakuten Ichiba the merchants can design their own storefronts themselves and engage with the platforms end-customers directly. However, what makes Rakuten Ichiba interesting as a digital ecosystem, is that outside of its core business of retail, Rakuten Ichiba is a leader in several different digital service sectors in Japan. Rakuten Ichiba's platform is built around its Super Points loyalty scheme, with customers able to earn and redeem Super Points for purchases across Rakuten's

ecosystem. Outside of Japan, Rakuten also has local marketplaces in numerous countries and has made several recent acquisitions in start-ups to grow its global user base including \$900 million in instant messaging service Viber in 2014 and a \$300 million investment in ride-share service Lyft in 2015.

Rakuten Group is the leading Internet company in Japan with an ecosystem spanning over 70 different services and a user base of over 100 million. Besides the Rakuten Ichiba platform spanning around 41,600 merchants (Rakuten Inc. 2016) the main benefits of the platform are the one-for all platform ecosystem spanning a multitude of services. In 2015, the number of customers using more than one Rakuten Ichiba service (cross-use ratio) was around 60% (Rakuten Inc. 2016). For end-customers this ecosystem is user-friendly built around Rakuten’s “Single Brand, Single Membership” philosophy, allowing customers to access all the services offered by Rakuten Ichiba through their single Rakuten user-ID. This Rakuten ecosystem includes digital services such as travel (Rakuten Travel), online banking (Rakuten Securities), marketing (Rakuten Marketing), e-books (Kobo), TV (Rakuten Showtime) - and mobile payment (Rakuten SmartPay) as shown through figure 2 (below). In several of these digital service sectors, Rakuten Ichiba is also the market leader in Japan (Rakuten Inc. 2016) which gives it an important societal role in Japan as it was one of the first succesful Japanese based internet companies. Outside of its core ecosystem Rakuten Ichiba also has services such as the Rakuten Edy e-money service that extends its business portfolio and customer reach. Like Alibaba Group, the over 100 million users allow Rakuten Ichiba to hold a deep understanding of its end-users shopping behavior to further customize the platforms user experience throughout the ecosystem with the company’s strategy outlining data analytics as one angle it will focus on more in the future.

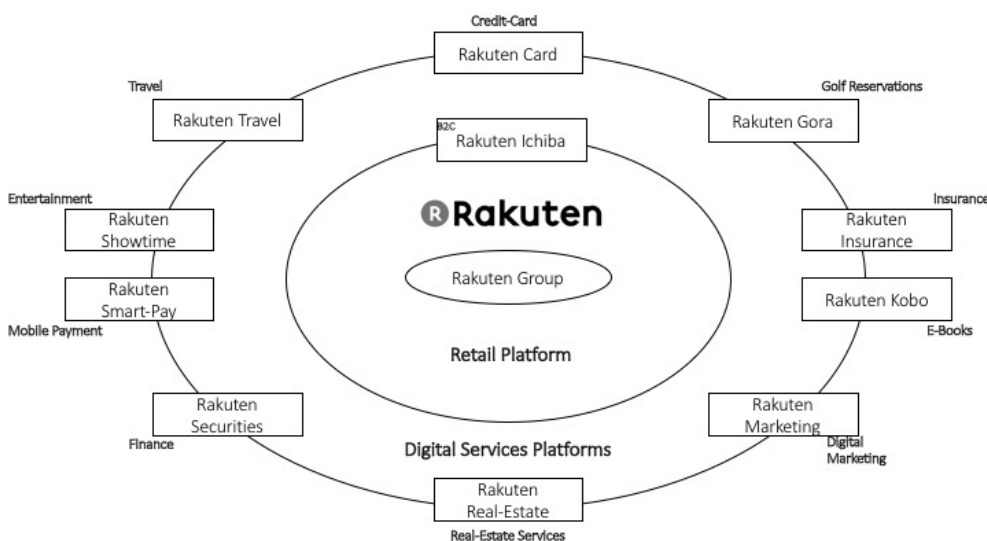


Figure 2. Rakuten Ecosystem (Rakuten Inc. 2016)

While Alibaba Group’s ecosystem serves as a supplementary earnings model as most of Alibaba’s e-commerce platform features are free-to-use for merchants, the Rakuten Ichiba platform is built to encourage the

platforms end-customers to centralize most their consumption to services provided through the Rakuten ecosystem. Based on the case analysis, Super Points loyalty program is one of the main drivers for the success of the Rakuten platform in Japan and besides the Amazon Prime membership scheme, it is the most advanced loyalty scheme used by a digital retail platform. In Japan, the Rakuten Super Points system is the most popular loyalty program for customers in terms of many metrics such as the points received (Rakuten Inc. 2016). This helps drive customers to more high-margin services such as banking, due to the increased loyalty towards the specific platform. Through the Super Points program, Rakuten's customers can earn and redeem rewards for all their purchases with Rakuten. With the Super Points program, Rakuten Ichiba can drive lock-in to an otherwise bazaar like platform with a large variety in the services offered. The Super Points program also extends outside the digital realm with the R-Point Card service launched in 2014, allowing customers to earn Super Points in 12,000 participating brick-and-mortar locations around Japan (Rakuten Inc. 2014). Merchants can also use Super Points in their own campaigns, for example by rewarding customers with double points for campaign items.

5. Discussion and Implications

The rise of the platform economy (cf. Van Alstyne et al. 2016) has created new service and customer experience oriented business models in many different sectors from transportation to banking in order to leverage the developments in information technology and to respond to the needs of more sophisticated and demanding customers around the world. In retailing multi-sided digital platforms are good examples of this transformation in business models as they own no inventory and no supply chain function thus moving away from the traditional vertical, wholesale retail model that was dominant for several decades as competitive advantage for retailers came from supply-chain efficiency. These digital retail platforms leverage a digital service portfolio and ecosystem which provides the backbone for the customer experience they offer.

In this paper we compared two digital retail platform companies, Alibaba Group and Rakuten Ichiba, in terms of their digital retail platform and ecosystem. While Alibaba Group's and Rakuten Ichiba's retail platforms are the most visible parts of the platform due to the large transaction volumes they have, it is indeed the ecosystem that is crucial for the firms in terms of facilitating user experience and as an important part of the firm's earnings model. According to the definition by Hagiu & Wright (2013) we characterize the two companies as pure multisided platforms. Both companies have a large network of users on their ecosystem consisting of end-customers and independent merchants. The main difference between the two platforms however is in the customer lock-in, as Rakuten Ichiba has a loyalty program, Super Points, in place to lock-in end-customers to Rakuten's digital ecosystem while Alibaba Group does not. However, Alibaba Group has in place more processes for customer engagement and its transaction volumes are significantly higher than on Rakuten Ichiba. Through the Alipay payment services and the investments in physical retail stores Alibaba

Group has extended its virtual platform to cover also physical transactions while for Rakuten Ichiba the physical engagement in terms of end-customers is limited to the R-Point Card system. Table 2 (below) summarizes these differences between the platform companies examined in this paper through a few key theoretical constructs discussed in the literature review.

Theoretical Construct	Alibaba Group	Rakuten Ichiba
Type of platform (cf. Hagiu & Wright 2013)	Pure Multisided Platform	Pure Multisided Platform
Network size (cf. Haucap & Heimeshoff 2014)	385 million users and 8.5 million merchants (2016)	106 million users and 40,000 merchants (2015)
Customer lock-in (cf. Choi 2010)	Weak (no loyalty program)	Strong (Super Points program)
Vertical integration (cf. Demirkan et al. 2011)	Outsourced Supply-Chain (main logistics partner Alibaba affiliated Cainiao Network)	Outsourced Supply-Chain (main logistics partner Yamato Transport)
Business Ecosystem (cf. Rong et al. 2015)	Alitrip (Travel) Ant Financial (Banking) Alibaba Cloud (Cloud Computing) Alimama (Digital Marketing) Cainiao Network (Logistics) Autonavi (Navigation) UCWeb (Web Browser) Youku (On-Demand Entertainment) Weibo (Social Media)	Rakuten Card (Credit-Card) Rakuten Gora (Golf) Rakuten Insurance (Insurance) Rakuten Kobo (E-Books) Rakuten Marketing (Digital Marketing) Rakuten Real-Estate (Real-Estate) Rakuten Securities (Banking) Rakuten SmartPay (Mobile Payment) Rakuten Showtime (Entertainment) Rakuten Travel (Travel)
Engagement processes (cf. Breidbach et al. 2016)	Virtual and Physical	Virtual and Physical

Table 2. Comparison of Alibaba and Rakuten ecosystems through theoretical constructs

Unlike software ecosystems where the platform owner relinquishes control away to third-party complementors such as app developers (cf. Thomas et al. 2014), our case study shows that platforms can maintain tight control in one part of the platform and open-up another for complementors. This kind of

platform business group structure (Jia & Kenney 2016) is interesting because it takes digital platforms further away from the traditional definitions of platforms used in economics and engineering literature (Gawer & Cusumano 2014; Tiwana 2014). In the case of Alibaba Group and Rakuten Ichiba's, the retail platform parts of the ecosystem are pure play platforms with products and services sold by independent merchants while the rest of the platform is closed, in tight control of the platform owner. This allows the platform owner to create lock-in by creating a service portfolio that is interesting for its customer base, for example to reduce multi-homing (Choi 2010). At the same time the ownership and control of the platform remains strictly in the hands of the platform owner, with clearly defined roles for the platform's complementors such as the merchants or other service providers.

Our results also show that the ecosystems of Alibaba and Rakuten allow the platforms to act as an engagement platform, extending their reach from a purely digital retail platform to an ecosystem consisting of interactions in both the digital and physical realms and in numerous different service exchanges from travel to banking. The physical interaction can be characterized as a supplying engagement platform archetype, facilitating a transition from a purely virtual, to a more integrative realm consisting of a combination of physical and digital (Breidbach et al. 2014; 2016). For Alibaba Group, this comes from the Alipay payment service that is the most used mobile payment service in China through Alipay Wallet also for physical purchases and for Rakuten Ichiba from the Super Points program that allows users to collect points also from purchases made in numerous physical locations through the R-Point Card service. Compared to for example pure e-commerce retailers, Alibaba Group and Rakuten Ichiba are thus able to fill a much larger part of their end-customers' daily life through the sum of their digital and physical interactions with the platform and affiliated services.

As stated by Kijima & Arai (2015), the co-creation opportunities created by digital platforms is one way to achieve competitive advantage. Retail companies should thus shift away from a traditional customer experience created through physical products and services and aim to increase the interactions with their customers' through an integrated offering. Each interaction with the end-customer allows the platform owners to better understand their customer base and opening the platform to complementors simply gives the retailer more transaction data to work with. As customers look for more personalized services, a digital service platforms consisting of multiple services is one way to achieve this sort of unique customer experience.

6. Conclusions and Limitations

The purpose of this paper was to understand the business models of digital service platforms, and how they drift further away from the traditional notions of customer experience as defined for example in the service-dominant logic literature (cf. Lusch et al. 2007). While several retailers are still trying to catch-up to Amazon in terms of user experience, companies such as Alibaba Group and Rakuten Ichiba are already ahead with their

integrated platform and digital service portfolio centered around their ecosystem. As the case studies show, Alibaba Group and Rakuten Ichiba have been successful in using the vast amounts of data they hold of their users purchase behavior to further customize the platform for their end-customers and create new exchange opportunities across the digital services sector. This takes the traditional definition of customer experience away from simply the user experience to something much more advanced as our paper illustrates. In the future, Big Data and tools such as VR and AI will play a more important role in retailing with platform based companies such as Alibaba Group and Rakuten Ichiba already having an edge due to the vast knowledge of their customers gathered through their ecosystem. A service portfolio is a theoretically interesting way to achieve such knowledge of customers and combining a wide range of transactional data together through an ecosystem is one way to achieve competitive advantage not before seen in retailing – at least at a similar scale.

We contribute to both marketing and service literature by showing that digital marketplaces are an interesting new research avenue as they take the logic of customer experience to a new level by creating an integrated service portfolio digitally. By analyzing two digital retail platforms, we fill the gap related to the lack of empirical evidences and theoretical understanding towards the business models of multi-sided digital retail platforms. Through the case analysis of Alibaba Group and Rakuten Ichiba, we demonstrate that at the heart of their business model is the ecosystem, and it is the most important factor driving customer lock-in and loyalty. This poses challenges for existing user experience centric business models where retailers are trying to invest in their front-end rather than understanding the role of Big Data and customer lock-in generated through an ecosystem centric business model. We generate further research opportunities by encouraging more empirical work into the customer behavior and service science implications of digital retail platforms. For example, further studies could seek to understand through customers how they evaluate the customer experience dimensions of different digital platforms and understand the future for this stream of service literature.

This paper approaches a new topic, multi-sided digital retail platforms, through the analysis of secondary material related to two case companies Alibaba Group and Rakuten Ichiba. The main limitation is the use of secondary data as a primary data source (e.g. Cooper et al. 2013) as it is difficult to assess the reliability of this data and gain a similar level of depth as would be possible with other types of data. This is however counterbalanced by the richness of the empirical data used and its broadness as the data has been gathered from a multitude of sources including Annual Reports. In practice, the use of secondary data limits the generalizability of the results and this should be considered when evaluating the findings of this research paper.

References

- Adner, R. and Kapoor, R., 2010. Value creation in innovation ecosystems: How the structure of technological interdependence affects firm performance in new technology generations. *Strategic Management Journal*, 31(3), pp.306-333.
- Armstrong, M., 2006. Competition in two-sided markets. *The RAND Journal of Economics*, 37(3), pp.668-691.
- Autio, E. and Thomas, L., 2014. Innovation ecosystems. *The Oxford handbook of innovation management*, pp.204-288.
- Boeije, H., 2009. Analysis in qualitative research. *Sage publications*.
- Breidbach, C.F. et al., 2014. Beyond virtuality: from engagement platforms to engagement ecosystems. *Managing Service Quality*, 24(6), pp.592–611.
- Breidbach, C.F. & Brodie, R.J., 2016. Nature and purpose of engagement platforms. In R. J. Brodie, L. Hollebeek, & J. Conduit, eds. *Customer engagement*. Routledge, pp. 118–130.
- Brodie, R.J., Hollebeek, L.D., Jurić, B. and Ilić, A., 2011. Customer engagement: conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research*, 14(3), pp.252-271.
- Chesbrough, H. (2011). Open services innovation. San Francisco, Jossey-Brass.
- Choi, J.P., 2010. Tying in two-sided markets with multi-homing. *The Journal of Industrial Economics*, 58(3), pp.607-626.
- Choudary, S.P., Parker, G.G.P. and Van Alstyne, M., 2015. Platform scale: how an emerging business model helps start-ups build large empires with minimum investment. *Platform Thinking Labs*.
- Cooper, D.R., Schindler, P.S. and Sun, J., 2003. *Business research methods*.

Davies, M., Pitt, L., Shapiro, D. and Watson, R., 2005. Betfair. com: Five Technology Forces Revolutionize Worldwide Wagering. *European Management Journal*, 23(5), pp.533-541.

Demirkan, H., Spohrer, J. & Krishna, V., 2011. Introduction of the Science of Service Systems. In H. Demirkan, J. Spohrer, & V. Krishna, eds. *Service Science: Research and Innovations in the Service Economy*. New York: Springer, pp. 1–12.

Eisenhardt, K.M. and Graebner, M.E., 2007. Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), pp.25-32.

Evans, D.S., 2003. Some empirical aspects of multi-sided platform industries. *Review of Network Economics*, 2(3), pp. 191-209.

Han, X., Martinez, V. and Neely, A., 2016. Service in the Platform context: a review of the state of the art. *Cambridge Service Alliance*.

Haucap, J. and Heimeshoff, U., 2014. Google, Facebook, Amazon, eBay: Is the Internet driving competition or market monopolization? *International Economics and Economic Policy*, 11(1-2), pp.49-61.

Kijima, K. and Arai, Y., 2016. Value Co-Creation Process and Value Orchestration Platform, in: Kwan, S.K., Spohrer, J.C., Sawatani, Y. (Eds.), *Global Perspectives on Service Science: Japan*. Springer USA, pp. 137–154.

Lusch, R.F., Vargo, S.L. and O'Brien, M., 2007. Competing through service: Insights from service-dominant logic. *Journal of retailing*, 83(1), pp.5-18.

Lusch, R.F. and Nambisan, S., 2015. Service Innovation: A Service-Dominant Logic Perspective. *MIS Quarterly*, 39(1), pp.155-175.

McIntyre, D.P. and Srinivasan, A., 2017. Networks, platforms, and strategy: emerging views and next steps. *Strategic Management Journal*, 38(1), pp.141-160.

- Mitronen, L. & Möller, K., 2003. Management of hybrid organisations: A case study in retailing. *Industrial Marketing Management*, 32(5), pp.419–429.
- Moore, J.F., 1993. Predators and prey: a new ecology of competition. *Harvard business review*, 71(3), pp.75-83.
- Pinho, N., Beirão, G., Patrício, L. and P. Fisk, R., 2014. Understanding value co-creation in complex services with many actors. *Journal of Service Management*, 25(4), pp.470-493.
- Ramaswamy, V., 2008. Co-creating value through customers' experiences: the Nike case. *Strategy & Leadership*, 36(5), pp.9–14.
- Ritala, P., Golnam, A. and Wegmann, A., 2014. Coopetition-based business models: The case of Amazon. com. *Industrial Marketing Management*, 43(2), pp.236-249.
- Rong, K., Hu, G., Lin, Y., Shi, Y. and Guo, L., 2015. Understanding business ecosystem using a 6C framework in Internet-of-Things-based sectors. *International Journal of Production Economics*, 159, pp.41-55.
- Thomas, L.D., Autio, E. and Gann, D.M., 2014. Architectural leverage: putting platforms in context. *The Academy of Management Perspectives*, 28(2), pp.198-219.
- Tiwana, A., 2013. Platform ecosystems: aligning architecture, governance, and strategy. *Newnes*.
- Van Alstyne, M.W., Parker, G.G. and Choudary, S.P., 2016. Pipelines, Platforms, and the New Rules of Strategy. *Harvard Business Review*, 94(4), pp.54-60.
- Verleye, K., 2015. The co-creation experience from the customer perspective: its measurement and determinants. *Journal of Service Management*, 26(2), pp.321-342.
- Yin, R., 1994. Case study research: Design and methods. *Beverly Hills*.

Yin, R.K., 2003. Case study research design and methods third edition. *Applied social research methods series*, 5.